

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

EPISTAR CORPORATION,

Plaintiffs,

v.

**LOWE'S COMPANIES, INC.,
LOWE'S HOME CENTERS, LLC,**

Defendants.

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CASE NO. 6:20-cv-00420-ADA

DEFENDANTS' RESPONSIVE CLAIM CONSTRUCTION BRIEF

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TABLE OF ABBREVIATIONS

'068 patent	U.S. Patent No. 7,489,068 (Dkt. 1-1; Dkt. 37-4)
'881 patent	U.S. Patent No. 8,240,881 (Dkt. 1-2; Dkt. 37-5)
'022 patent	U.S. Patent No. 9,065,022 (Dkt. 1-3; Dkt. 37-6)
'340 patent	U.S. Patent No. 9,664,340 (Dkt. 1-4; Dkt. 37-7)
'455 patent	U.S. Patent No. 10,224,455 (Dkt. 1-5; Dkt. 37-8)
Fitz. Report	Rebuttal Expert Report of Dr. Dr. Eugene Fitzgerald on Invalidity for 17-cv-03219 in the Central District of California (Ex. A)
Webster's	Random House Webster's Unabridged Dictionary (2d ed. 2001) (Ex. B)
Modern	Modern Dictionary of Electronics (7th ed. 1999) (Ex. C)
Oxford	Concise Oxford American Dictionary (2006) (Ex. D)
Wiley	Wiley Electrical and Electronics Engineering Dictionary (2004) (Ex. E)
Hecht	Hecht Optics (2d ed. 1987) (Ex. F)
Keating	Michael P. Keating, Geometric, Physical, and Visual Optics (2d ed. 2001) (Ex. G)
Merriam	Merriam Webster's Collegiate Dictionary (10th ed. 1997) (Ex. H)
Doolittle Decl.	Declaration of Alan Doolittle, Ph.D. in Support of Defendants' Opening Claim Construction Brief (Ex. 1)
Fitz. Decl.	Declaration of Eugene Fitzgerald, Ph.D. in Support of Plaintiff's Opening Claim Construction Brief (Dkt. 37-1)
Fitz. Tr.	Transcript of the December 23, 2020 Deposition of Eugene Fitzgerald (Ex. I)
Lowe's Disclosure	Defendants' Exchange of Proposed Claim Construction (Ex. J)
'340 File History	File History of U.S. Application No. 14/301,060 (Ex. K)

Pursuant to this Court’s Scheduling Order (Dkt. 36), Defendants Lowe’s Companies, Inc. and Lowe’s Home Centers, LLC (“Lowe’s” or “Defendants”) hereby file their responsive claim construction brief.

I. INTRODUCTION

Plaintiff Epistar Corporation’s (“Epistar”) Opening Claim Construction Brief (Dkt. 37) is replete with flawed analyses and logical inconsistencies. Although Epistar was afforded the opportunity to present first, rather than support its proposed claim constructions, Epistar’s brief is largely directed at criticizing Lowe’s’ proposals. Moreover, many of the purported flaws identified by Epistar are repeated throughout Epistar’s own analyses, undercutting the very principles it purports to uphold. These flaws and others are addressed below, although a full accounting would significantly exceed the allotted pages.

II. RESPONSE TO EPISTAR’S “CLAIM-CONSTRUCTION” SECTION

In view of the Court’s familiarity with patent law, a pages-long discussion of claim-construction law is unwarranted. Instead, Lowe’s will provide supporting citations for the relevant legal doctrines as necessary in the sections below. This section highlights what Lowe’s considers an essential, but at times underappreciated, consideration during claim construction – the jury.

Rather than an academic exercise of rewording the claims (a criticism Epistar repeatedly levies at Lowe’s), a central purpose of claim construction is to “provide the jury with a clear understanding of the disputed claim scope.” *Eon Corp. IP Holdings v. Silver Spring Networks*, 815 F.3d 1314, 1320 (Fed. Cir. 2016)¹. Of course, a court need not provide constructions for every term. *See Meetrix IP, LLC v. Citrix Sys., Inc.*, No. 1:16-CV-1033-LY, 2017 WL 5986191, at *9 (W.D. Tex. Dec. 1, 2017) (holding that no construction is necessary because “a jury will

¹ All emphasis herein is added unless otherwise described.

understand the meaning of the term ‘moderator’”). But the focus of that analysis must remain on presenting instructions capable of application by jurors. *See TQP Dev., LLC v. Merrill Lynch & Co.*, No. 2:08-CV-471-WCB, 2012 WL 1940849, at *2 (E.D. Tex. May 29, 2012) (holding that “some construction of the disputed claim language will assist the jury to understand the claims”). As explained below, Epistar’s positions repeatedly ignore this basic function.

III. LOWES’S OBJECTS TO EPISTAR’S IMPROPER RESERVATION OF RIGHTS

Epistar states that “[f]or terms that Epistar proposes should be afforded plain meaning, Epistar reserves the right to provide a construction for the plain meaning if the Court finds such construction to be necessary.” (Dkt. 37 at 4 n.1.) Nothing in the Court’s standing orders suggests that a party may unilaterally withhold its positions, only to be revealed later. Epistar’s “reservation” violates the letter and spirit of the Court’s Order. Instead, Epistar would have the Court validate the long-rejected “shifting sands approach to claim construction.” *See O2 Micro Int’l Ltd. v. Monolithic Power Sys., Inc.*, 467 F.3d 1355, 1364 (Fed. Cir. 2006) (quoting *Atmel Corp. v. Info. Storage Devices, Inc.*, No. C 95–1987 FMS, 1998 WL 775115, at *2 (N.D. Cal. 1998)). The Court should reject this gamesmanship and hold Epistar to its positions.

This conduct mirrors events that occurred during a still-pending litigation in the Central District of California. There, Epistar relied upon Dr. Fitzgerald to disclose “ordinary meaning” constructions long after the close of claim construction in an attempt to preserve validity. For example, in his rebuttal report, Dr. Fitzgerald opined: “the claimed adhesive layer ‘has a high resistance and is capable of electrically isolating the substrate 10 from the first LED 110 and the second LED 120 when being installed between them.’” (Ex. A² at 100.) Similarly, Dr. Fitzgerald opined that the term “substrate” is “a term of art specific to LED growth and packaging with

² References to (Ex. #) herein are to the corresponding exhibit to the Declaration of Sara Staha.

relevant engineering characteristics.” (*Id.*) In short, Epistar’s unilateral reservation of rights, although predictable, should be rejected by the Court as incompatible with proper litigation tactics.

IV. ARGUMENT

The subsections below each address a disputed term. In addition, if understood, each subsection begins with a brief summary of the parties’ substantive dispute. A number of disputed terms appear in multiple asserted patents. Because the parties do not rely on lexicography or disclaimer for those terms, each such term is addressed solely at its first appearance according to the Court’s Standing Order. Epistar’s section number is maintained for clarity.

A. Disputed Terms From U.S. Patent No. 7,489,068 (“the ’068 patent”)

1. “substrate”/“transparent substrate” (jointly proposed - ’068, ’881, ’022, and ’455 patents)

Lowe’s Proposal	Epistar’s Proposal
A solid support through which objects may be clearly seen.	Plain meaning or a medium, capable of being bonded to a light emitting stack by a transparent adhesive layer, that allows for light refraction

The parties present a number of disputes: (1) whether an express construction is necessary; (2) whether to construe “substrate” according to its ordinary meaning (as Lowe’s proposes) or instead to import limitations from the specification (as proposed by Epistar); and (3) whether to afford “transparent” its ordinary meaning (as Lowe’s proposes) or instead to replace that concept with the description “allows for light refraction” (as proposed by Epistar).

Construction is necessary: Epistar’s primary position is that no construction is necessary, and instead, the jury be instructed with “plain meaning.” (Dkt. 37 at 5 (“Epistar does not believe that ‘substrate’ or ‘transparent substrate’ needs to be construed.”).) Confusingly, Epistar provides a footnote suggesting that it will later disclose that plain meaning and also presents a 20-word construction. (Dkt. 37 at 4 n.1). This formulation obscures rather than discloses Epistar’s position. Regardless, material disputes exist regarding the scope of these claim terms, and therefore, express

construction is warranted. *O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008) (“When the parties raise an actual dispute regarding the proper scope of these claims, the court, not the jury, must resolve that dispute.”).

In support of its “plain meaning” position, Epistar asserts that “[t]he term ‘substrate’ is well-known and understood by a POSITA.” (Dkt. 37 at 5.) Whether a person of skill would have understood that term at relevant time is relevant to definiteness, but cannot be the basis for refusing to properly instruct the jury. As discussed in Section II, a fundamental purpose of claim construction is to “provide the jury with a clear understanding of the disputed claim scope” *Eon Corp.*, 815 F.3d at 1320. Epistar’s focus on a “POSITA” rather than the jury misses the mark.

In addition, as discussed in Section III, Epistar is apparently positioning Dr. Fitzgerald to construe the term live for the jury by opining that a “substrate” as recited in the ’068, ’881, ’022, and ’455 patents required distinct “engineering properties.” (Dkt. 37-1 ¶¶15, 33, 38, and 56.)³ Indeed, in the earlier litigation Dr. Fitzgerald opined that “substrate” is “a term of art specific to LED growth and packaging with relevant engineering characteristics.” (Ex. A at 100.) Epistar’s “reservation” and expert declaration indicate an improper plan to shift positions later in the case.

A “substrate” should be construed based on what it is: Parsing the portions of each parties’ construction directed to the structural aspects of the term “substrate,” Lowe’s asserts that the term refers to a “solid support,” whereas Epistar uses the vague term “medium.” In effect, the parties agree that “substrate” is a broad term, which is consistent with its ordinary usage in the English language. (Ex. B (Webster’s) LHC-TX-0001737 (defining “substrate” as “supporting”

³ When asked about the “plain and ordinary meaning” of the term “substrate” during his deposition, Dr. Fitzgerald provided confusing and internally inconsistent responses. (*See, e.g.*, Ex. I at 31:23-42:6.) For example, when asked “what does the term ‘substrate’ by itself mean according to its plain and ordinary meaning”, Dr. Fitzgerald answered “It’s a material that you can use for the invention.” (*Id.* at 40:5-14.)

material on which a circuit is formed or fabricated”).⁴ Similarly, technical dictionaries suggest a broad structural definition. (Ex. C (Modern) LHC-TX-0001716 (defining “substrate” as “1. The supporting material on or in which the parts of an integrated circuit are attached or made.”).⁵ Moreover, the ordinary English and technical usages are consistent with the asserted patents, which all depict and describe substrates comprising solid supports. (*See, e.g.*, Dkt. 1-1 (’068 patent) Fig. 3, element 110; Dkt. 1-2 (’881 patent) Fig. 6, element 404; Dkt. 1-3 (’088 patent) Fig. 1A, element 2; Dkt. 1-5 (’455 patent) Fig. 2A, element 210).)

Rather define what a “transparent substrate” is, Epistar’s construction uses the unhelpful term “medium” and proposes two vague capabilities – “capable of being bonded to a light emitting stack by a transparent adhesive layer” and “allows for light refraction.” (Dkt. 37 at 4.) As to “medium,” that vague term encompasses all known states of matter. Moreover, Epistar fails to identify the source of “medium” as used in its construction. Indeed, rather than defend its proposal, Epistar merely complains that the concepts “solid” and “support” do not appear in the intrinsic record. (*Id.* at 6.) Support for those concepts do come from the intrinsic record and extrinsic evidence as addressed in the preceding paragraph. Support for “medium,” however, does not.

Next, as to the capability aspects of its construction, Epistar includes them in an open-ended list of characteristics that differs materially from its proposed construction:

[A] POSITA reviewing the specifications of the Asserted Patents would understand that such a substrate would have specific properties, including [1] the capability of being bonded to a light emitting stack by a transparent adhesive layer, [2] light refraction, and [3] be an insulator or a conductor.

(Dkt. 37 at 5.) Nowhere does Epistar suggest that these characteristics comprise the “ordinary

⁴ (Ex. H (Merriam) LHC-TX-00001699 (defining “substrate” in terms of the word “substratum,” which is defined as “an underlying support.”).)

⁵ (Ex. E (Wiley) LHC-TX-0001756 (defining “substrate” as “[t]he base layer, or other surface upon which something is deposited, etched, attached, or otherwise prepared or fabricated.”).)

meaning” of “substrate.” Instead, Epistar simply picks and chooses portions of four different patents to import into its construction. Epistar, however, does not assert that all four patents have the same definition and/or disclaimer, and thus, Epistar violates the very *Thorner*⁶ decision it cites. Dr. Fitzgerald applied the same dubious reasoning in his declaration (Dkt. 37-1 at ¶¶15, 33, 38, 56) and during his deposition (Ex. I 33:12-36:19 (describing “engineering properties” purportedly required by the ordinary meaning of “substrate” as use in the ’068 patent); 136:25-150:15 (the ’881 patent); 161:14-163:4 (the ’881 patent); 227:8-239:5 (the ’455 patent).)⁷

The ordinary meaning of “transparent” is clearly seen through: The term “transparent” is a common English-language term with which the Court and the jury will be well acquainted. To provide a simple example, ordinary window glass is “transparent.” (Doolittle Decl. ¶¶15-17.) The fundamental dispute between the parties (although not presented in Epistar’s construction), is whether the term “transparent” encompasses the different concept “translucent.” Webster’s distinguishes those concepts: “[t]hat which is TRANSPARENT allows objects to be seen clearly . . . That which is TRANSLUCENT allows light to pass through, diffusing it, however, so that objects beyond are not distinctly seen.” (Ex. B, LHC-TX-0001735.)⁸

Rather than address transparent’s ordinary meaning, Epistar relies on Dr. Fitzgerald’s opinion that “transparent” has a special meaning in “the sense of LED technology.” (Dkt. 37 at 6 (citing Dkt. 37-1 (Fitz. Decl.) ¶¶ 15-16); *see also* Ex. I (Fitz. Tr.) 42:7-45:13.) That the purported meaning, however, does not appear in Epistar’s construction. Moreover, nowhere in the cited

⁶ *Thorner v. Sony Comput. Entm’t Am., LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012).

⁷ During his deposition, Epistar’s counsel instructed Dr. Fitzgerald not to answer questions, including: “How do I know whether something is or is not a substrate within the context of the claims of the ’455 patent?” (Ex. I (Fitz. Tr.) 233:8-236:11.)

⁸ *See also* Ex. H (Merriam) LHC-TX-0001697 (providing similar definitions for translucent and transparent); Ex. D (Oxford) LHC-TX-0001638 (providing a similar definition of transparent).

paragraphs did Dr. Fitzgerald provide any support beyond his conclusions. (Dkt. 37-1 (Fitz. Decl.) at ¶¶15-16; Ex. I (Fitz. Tr.) 62:19-64:2.) Instead, he references “colonial glass,” which he fails to link to the LED field. (Dkt. 37-1 (Fitz. Decl.) ¶16; Ex. (Fitz. Tr.) 53:4-10.) He also references “alumina (polycrystalline Al₂O₃)” which he refers to as “patent embodiments.” (*Id.*) Although alumina is known a polycrystalline ceramic material, none of the relevant patents refer to “alumina” or uses the term “polycrystalline.” (Doolittle Decl. ¶20.) Dr. Fitzgerald’s reliance on “patent embodiments” of his own creation, therefore, was error. (*Id.*)

Finally, Epistar relies on an online-dictionary definition of “transparent.” (Dkt. 37 at 6.) Nothing in that definition, however, is specific to “LED technology.” Epistar’s reliance on that definition, therefore, conflicts with its position that “transparent” has a special meaning for LEDs.

2. “a light emitting stack having a first diffusing surface” (jointly proposed)

Lowe’s Proposal	Epistar’s Proposal
An arrangement of layers stacked ⁹ one atop another that together generate light, wherein one of the layers includes a [diffusing surface]. ¹⁰	“light-emitting stack” should be afforded its plain meaning or a planar layered LED type. See constructions of “diffusing surface.” The remaining terms should be afforded plain meaning

Epistar’s brief obscures rather than clarifies the disputes. In particular, here again Epistar suggests “plain meaning” and an alternative. In addition, Epistar’s analysis presents a third construction “a plurality of planar semiconductor layers disposed above the transparent substrate and the diffusing surface.” (Dkt. 37 at 8.) There are two disputes: (1) whether construction is necessary and (2) whether “planar” and a specific location should be imported into the claims.

Construction is necessary: As with the preceding term, Epistar’s primary position is

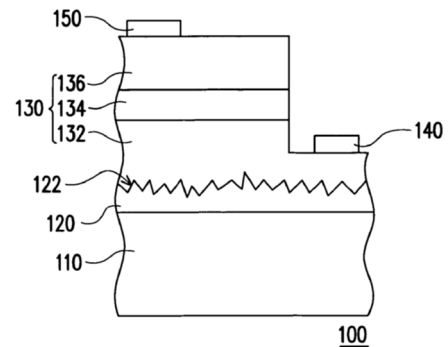
⁹ Epistar criticizes Lowe’s for using the word “stacked” in its construction. (Dkt. 37 at 7.) Upon reflection, that term is superfluous and may be omitted.

¹⁰ Epistar appears confused by Lowe’s proposal, suggesting that the language “‘wherein one of the layers includes a [diffusing surface]’ adds nothing to the claim.” (Dkt. 37 at 7.) As explained in Lowe’s disclosure (Ex. J at 2), the use of brackets indicates the terms is addressed separately.

“plain meaning.” (Dkt. 37 at 7.) However, Epistar’s alternative construction – “a planar layered LED type” – bears no resemblance to the terms “stack” or “light emitting.” Instead, Epistar improperly imports aspects of the ’068 patent’s specification into the claim language, confirming its position that plain meaning is insufficient.

Planarity is not required: The only source for Epistar’s “planar” proposal appears to be “stack.” That simple term, however, neither suggests nor requires planarity. (Doolittle Decl. ¶¶24-25.) The most relevant definition provided by Webster’s is “to be arranged in or form a stack: *These chairs stack easily.*” (Ex. B at LHC-TX-0001732.) And Oxford proposes “a pile of objects, typically one that is neatly arranged: *a stack of boxes.*” (Ex. D at LHC-TX-0001639.) Even if considered a technical term, Wiley defines “stack” as “[a]n orderly pile in which elements are arranged in layers, related groups, or the like.” (Ex. E at LHC-TX-0001753.) Indeed, anyone who has observed a stack of bowls, plates, or chairs can confirm planarity is not required. Instead, the term merely requires an arrangement of elements one atop another.¹¹ (Doolittle Decl. ¶25.)

The sole support Epistar cites for importing planarity into the claims comprises a reference to figure 3 (reproduced at right) (*see* Dkt. 37 at 8). Even if the layers depicted in figure 3 were all planar (which they are not), that aspect should not be imported into the claims. *Phillips v. AWH Corp.*, 415 F.3d



1303, 1319-20 (Fed. Cir. 2005) (*en banc*) (describing that form of claim construction as a “one of the cardinal sins of patent law”). Moreover, the bottom of layer 132 as depicted in figure 3 is not planar. Indeed, the ’068 patent discloses that the bottom surface may include “semi-sphere[s], pyramid[s], pyramid polygon[s].” (Dkt. 1-1 at 5:33-36; Doolittle Decl. ¶26.) Epistar’s proposal,

¹¹ There appears to be no dispute that the elements are layers based on Epistar’s use of “layered.”

therefore, conflicts with the intrinsic record. In addition, Dr. Fitzgerald conceded during his deposition that he was aware of a field directed to non-planar LEDs (Ex. I at 68:6-69:25) and also that the layers of a seemingly planar LED may include non-flat surfaces (*id.* at 71:8-76:8).

Epistar fails to support its alternative construction: Epistar proposes replacing the term “light emitting stack” with “planar layered LED type.” (Dkt. 37 at 7.) Other than the planar aspect, Epistar largely ignores its own proposal. Indeed, Epistar’s primary focus appears to be criticizing Lowe’s for allegedly “commit[ting] legal error and inject[ing] ambiguity into the claim.” (*Id.*) Despite that bold statement, Epistar nowhere identifies the purported legal error or ambiguity. Instead, Epistar confusingly questions whether “Lowe’s is attempting to exclude an LED chip from the scope of the claims.” (*Id.*) It is unclear where Epistar infers such an exclusion or why it would be relevant to the scope and meaning of the term “light emitting stack.” No further response to Epistar’s unsupported construction, therefore, is possible at this time.

Epistar fails to support its newly-disclosed construction: For its third construction, Epistar proposes “a plurality of planar semiconductor layers, disposed above the transparent substrate and diffusing surface.” (Dkt. 37 at 8.) That Epistar infers those requirements from the three words “light emitting stack” is remarkable. In addition to importing limitations, Epistar’s proposal adopts an incorrect location requirement for the “diffusing surface.” In particular, the claim requires only “a light emitting stack having a first diffusing surface above the transparent substrate.” (Dkt. 1-1 at 6:51-52.)

3. “diffusing surface” (proposed by Epistar)

Lowe’s’ Proposal	Epistar’s Proposal
An interface between two materials that scatters light, each material having [an index of refraction . . . different from] the other.	An interface or a surface for reflecting light so as to extract light from the front of the light emitting stack

The primary dispute is whether the term “diffusing” corresponds to scattering (as proposed

by Lowe's) or instead means reflecting so as to extract light from the front (as proposed by Epistar).

To diffuse light means to scatter: Because “diffusing” is a common English-language word, dictionaries again provide a helpful¹² starting point. *Phillips*, 415 F.3d at 1314. Webster's defines “diffuse” as “to spread or scatter widely or thinly.” (Ex. B at LHC-TX-0001734.) And also defines “diffuser” as “(in a light fixture) any of a variety of translucent materials for filtering glare from the light source.”¹³ (*Id.*) Similarly, the Modern Dictionary of Electronics defines “diffuse” as “[l]ight that has been either inadvertently or purposely scattered.”¹⁴ (Ex. C, LHC-TX-0001714; see also Ex. F (Hecht) LHC-TX-0001657 (explaining that “the scattering process is responsible for the index of refraction as well as the resultant reflected and refracted waves”).) Thus, diffusion encompasses scattering that can occur by reflection or refraction. (Doolittle Decl. ¶¶27-28, 32.)

That a diffusing surface may provide reflection and refraction can also be understood by reference to the '068 patent's figures. Figure 2 (reproduced at right) depicts light ray 1A reflecting from diffusing surface S to become diffused light field 1C and refracting through diffusing surface S to become diffused light field 1B. (Dkt. 1-1 at

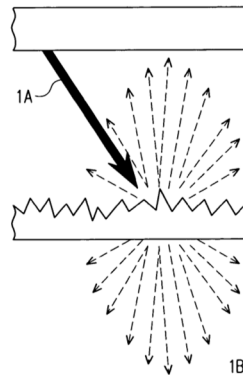


FIG. 2

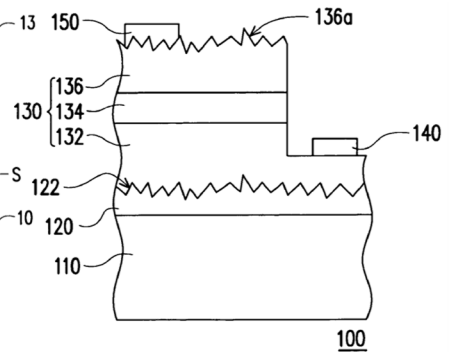


FIG. 4

¹² Lowe's does not cite these definitions as controlling in the sense of the repudiated holding in *Tex. Digital Sys., Inc. v. Telegenix, Inc.*, 308 F.3d 1193, 1202 (Fed. Cir. 2002), but instead as permissible guidance under *Phillips*.

¹³ Merriam defines “diffuser” as “a device (as a reflector) for distributing the light of a lamp evenly” or “a screen (as a cloth or frosted glass) for softening lighting.” (Ex. H LHC-TX-0001696.)

¹⁴ Wiley defines “diffusion” to mean “The passage of light through a translucent material . . . The scattering of light when reflected off an irregular surface.” (Ex. E LHC-TX-0001754.) And the textbook *Geometric, Physical and Visual Optics* explains that diffusion can occur by “[r]eflection from a rough surface” or by passing through “translucent materials.” (Ex. G LHC-TX-0001688-89.)

4:33-39.) Thus, the patent does not distinguish between one optical effect and the other as corresponding to the “invention.” Additional support is provided by figure 4 (reproduced above right), which shows “diffusing surface 136a” located at the light output surface. (*Id.* at 5:14-17.) The patent does not seek to increase reflection at light output surface 136a, as the goal is to extract light “forward” from device 100 via refraction. (Ex. I (Fitz. Tr.) 104:13-105:2.)

Epistar’s construction lacks merit: Rather than construe the ordinary meaning of the term “diffusion surface,” Epistar suggests adopting its view of “[t]he unambiguous description of the purpose of the invention – to extract light from the front of the light stack via reflection.” (Dkt. 37 at 10.) As discussed above with respect to figures 2 and 4, Lowe’s disagrees that the “purpose” of the diffusion surface is solely reflection. Regardless, the Federal Circuit has long held that claims are generally not limited to a specific “perceived purpose” *E-Pass Tech., Inc. v. 3Com Corp.*, 343 F.3d 1364, 1370 (Fed. Cir. 2003) (finding error where the “district court sought to limit the claims in light of the perceived purpose served by the invention”).

4. “a transparent adhesive layer between the transparent substrate and the first diffusing surface, wherein an index of refraction of the light emitting stack is different from that of the transparent adhesive layer” (Proposed by Lowe’s)

Lowe’s’ Proposal	Epistar’s Proposal
A bonding material (1) through which objects may be clearly seen, (2) that attaches the [transparent substrate] to the first [diffusing surface], and (3) in which light travels at a different speed than in the [light emitting stack], resulting in the light bending as it passes from one to the other.	Plain meaning; see constructions of “transparent substrate,” “diffusing surface,” and “light emitting stack”; and the remaining terms should be afforded plain meaning

As Epistar correctly notes, a number of subsidiary terms (including “transparent”), are addressed elsewhere. The primary dispute is whether construction is necessary. Lowe’s asserts that a construction is necessary both because a dispute exists and in order to provide clarity for the jury.

Construction is necessary: As an initial matter, Lowe’s notes that Dr. Fitzgerald opined in a prior case that the term “adhesive” should be narrowly construed. (Ex. A at 100 (“the claimed

adhesive layer ‘has a high resistance and is capable of electrically isolating the substrate 10 from the first LED 110 and the second LED 120 when being installed between them’).) That flawed opinion, which was disclosed long after claim construction, was purportedly based on the ordinary meaning as understood by a person of ordinary skill. For the reasons discussed in Section III, Epistar and its expert should provide its position on the scope and meaning now rather than at some later date. Only then can the Court identify fundamental disputes.

In addition, Epistar did not explain how a lay jury would understand or apply the “plain meaning” of at least the “index of refraction” recitations. Jury instructions based on Epistar’s proposal, therefore, would fail in their fundamental purpose. *Eon Corp.*, 815 F.3d at 1320.

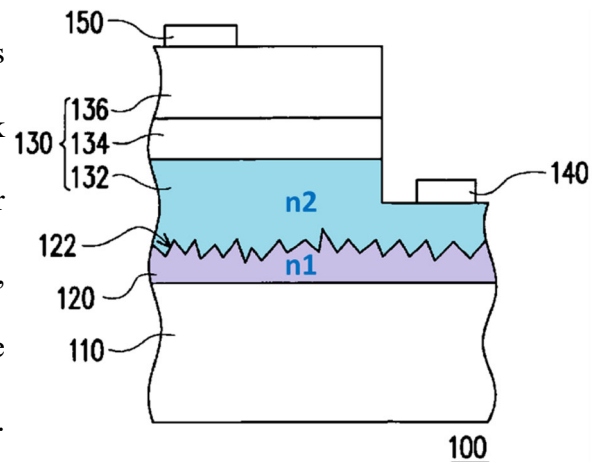
“adhesive” requires construction: As discussed above, Epistar took the position that “adhesive” has a special meaning in other litigation against Lowe’s. To avoid later dispute in this matter, the Court should confirm that “adhesive” is a broad term that refers to a bonding material. (See Ex. C (Modern) LHC-TX-0001724 (defining adhesive as “[a] substance used to bond two or more solids so that they act or can be used as a single piece”)¹⁵; see also Doolittle Decl. ¶34.)

“index of refraction” is defined in terms of the speed of light in a medium: Epistar asserts that Lowe’s’ proposal “replaces [the claim] language . . . with [an] effect,” which it asserts is improper for apparatus claims. (Dkt. 37 at 11-12.) Epistar misunderstands both Lowe’s’ proposal and what “index of refraction” means. The index of refraction of a medium is a physical characteristic defined in terms of the speed of light in that medium relative to vacuum. (Ex. G (Keating) LHC-TX-0001689 (“[t]he index of refraction n of the medium is a ratio of the speed c of the light in a vacuum to the speed v_m of the light in the medium”); Ex. C (Modern) LHC-TX-0001717 (“Ratio of the speeds of light or other radiation in two different materials. This determines

¹⁵ (See also, Ex. B (Webster’s) LHC-TX-0001736; Ex. D (Oxford) LHC-TX-0001641.)

the amount the ray will be refracted or bent when passing from one material to the other such as from air to water.”); *see also* Ex. I (Fitz. Tr.) 96:15-97:22; Doolittle Decl. ¶¶29, 36.) In the context of a “diffusing surface,” the requirement of a difference in index of refraction across the interface is fundamental. Stated differently, a “diffusing surface” will not exist between materials having the same index of refraction – a concept known as index matching. (Ex. C (Modern) LHC-TX-0001717; *see also* Ex. I (Fitz. Tr.) 83:10-88:13; Doolittle Decl. ¶31.) This understanding is confirmed from the ’068 patent’s description of “Snell’s law,” which requires a difference in index of refraction. (Dkt. 1-1 at 1:24-45; Doolittle Decl. ¶31.)

Restated, this recitation is directed to characterizing the interface (122) between the light emitting stack and the adhesive, *i.e.*, the “diffusing surface.” As discussed with respect to the preceding recitation, scattering occurs at the diffusing surface via reflection and refraction, which, in turn, result from the different refractive indices across the interface between the light emitting stack and the adhesive. This interface is shown, for example, in figure 3 (colored and annotated at right), where scattering occurs at the interface between the bottom layer of the stack (132) and adhesive (120).



(*See also* Ex. F (Hecht) LHC-TX-0001668 (explaining that reflection and refraction require differently indexed materials).) The ’068 patent describes this as the “present invention”:

The present invention is to combine the transparent substrate and the light emitting stack together by the transparent adhesive layer having the diffusing surface. The light emitting stack and the transparent adhesive layer have different indices of refraction, such that the possibility of light extraction of the light emitting device is raised, and the light emitting efficiency is improved, too.

(Dkt. 1-1 (’068 patent) 6:34-40.) In other words, it is the difference in refractive indices between the adhesive layer and stack that results in diffusion at the transition. (Doolittle Decl. ¶¶28-31, 35.)

5. “rough” (proposed by Lowe’s)

Lowe’s’ Proposal	Epistar’s Proposal
Uneven or irregular.	Plain meaning

At a superficial level, there appears to be no fundamental dispute. However, as discussed in Section III, the issue is Epistar’s idiosyncratic view of “plain meaning.” In particular, Epistar asserts by parenthetical that “the intrinsic record support[s interpreting a] rough surface as effecting reflection of light.” (Dkt. 37 at 12; *see id.* at 13.) That, of course, is not what a rough surface is, but instead a partial identification of the effect such a surface may provide. That, however, is precisely the form of claim construction that Epistar incorrectly asserts disqualified Lowe’s’ construction of the preceding term. (*See id.* at 11-12.) In a similar show of inconsistency, Epistar complains that Lowe’s’ proposal includes “or,” an issue that infects Epistar’s construction of “diffusing surface” and “carrier.” In short, there may be no dispute, but Epistar’s effective silence and inconsistent positions leave the record unclear.

Dr. Fitzgerald’s position on this term also merits response. In particular, he testified that a specific “scale” of roughness is required (Ex. I (Fitz. Tr.) 113:4-155) and also equated “rough” with “nonplanar” (*id.* at 114:6-24). Subsequently, however, he was unable to define the specific scale of roughness. (*Id.* at 117:15-132:2; *see also* Doolittle Decl. ¶¶37-38.) Epistar’s position as to the scope and meaning of “rough,” therefore, remains ambiguous.

B. Disputed Terms From U.S. Patent No. 8,240,881 (“the ’881 patent”)

1. “carrier” (’881 and ’340 patents)/“a carrier having a platform” (’881 patent)¹⁶

Lowe’s’ Proposal	Epistar’s Proposal
“carrier”: a structure on which an object is carried. “carrier having a platform”: a structure having a level surface on which an object is carried.	The term “carrier” should be afforded its plain meaning, and the term “platform” means “a surface or feature of the carrier used to support the transparent substrate.” The remaining terms should be afforded their plain meaning.

¹⁶ For simplicity and to avoid repetition, these related terms are addressed here together.

The term “carrier” was identified for construction by Epistar from the ’881 patent and as part of the phrase “carrier having a platform” by Lowe’s from that same patent. The term “carrier” was also identified by Lowe’s from the ’340 patent. Despite conceding that “carrier” as used in the ’881 patent requires construction, Epistar failed to propose one. (Dkt. 37 at 13.) The disputes are: (1) whether “carrier” requires construction; and (2) the proper construction of “platform.”

“carrier” should be construed under 35 U.S.C. §112, ¶6: For the common word “carrier”, dictionaries again provide guidance. The relevant definitions indicate an ordinary meaning based on function. (*See* Ex. D (Oxford) LHC-TX-0001644; Ex. B (Webster’s) LHC-TX-0001739; Ex. H (Merriam) LHC-TX-0001701.) Although Lowe’s’ construction attempted to present a structural meaning, Epistar’s critique (Dkt. 37 at 13) highlights the lack of meaningful limitation. Indeed, the fact that the term “carrier” does not connote a specific structure is effectively conceded by Epistar. (Dkt. 37 at 21 n.2 (distinguishing between the “carrier[s]” as recited in the ’881 and ’340 patents).) In other words, Epistar’s own analysis confirms the inapplicability of a “plain meaning” construction. (*Id.*) Based on the record evidence, therefore, “carrier” should be construed as a mere functional placeholder (*i.e.*, under 35 U.S.C. §112, ¶6). The corresponding structure in the ’881 patent is “a printed circuit board, a ceramics substrate, or a silicon substrate.” (Dkt. 1-2, Fig. 6, 3:39-41.) And the corresponding structure in the ’340 patent is described at 20:28-45. Holding otherwise would permit the recitation “carrier” to encompass any conceivable structure capable of carrying.

“platform” requires a level surface: the term “platform” connotes a structure having a “level surface.” (*See* Ex. D (Oxford) THC-TX-0001645 (“a raised level surface on which people or things can stand”); Ex. B (Webster’s) LHC-TX-0001740 (“a horizontal surface or structure with a horizontal surface”); Ex. H (Merriam) LHC-TX-0001702 (“usu. raised horizontal flat surface”).

Epistar asserts that it would be improper to interpret “platform” to require a “level surface” absent a disclaimer. (Dkt. 37 at 13.) That position lacks merit. The only example platform identified in the ’881 patent is platform (603), which comprises a raised level surface. (Dkt. 1-2, Fig. 6; 3:33-46.) Rather than limiting “platform” based on lexicography or disclaimer, Lowe’s proposal affords the term its ordinary meaning. In contrast, Epistar’s construction provides no structural meaning, encompassing any “surface or feature . . . used to support the transparent substrate.” (Dkt. 37 at 13.) That sort of functional language, however, fails to identify the necessary structure corresponding to a platform, which has a plain and ordinary meaning.

3. “formed on” (jointly proposed – ’881 patent, proposed by Lowe’s - ’340 patent)

Lowe’s Proposal	Epistar’s Proposal
Made or created upon.	Plain meaning

Although this term was jointly proposed for the ’881 patent (though missing from Epistar’s list for the ’340 patent), Epistar again refuses to identify the alleged “plain meaning.” (Dkt. 37 at 14.) Epistar’s silence provides the Court with no basis to determine whether a fundamental dispute exists. Parsing the two-word phrase, the first is the past tense of the verb “form” and the latter identifies the location where that past activity occurred – “on.” That “form” comprises an active process is supported by dictionaries. (*See* Ex. B (Webster’s) LHC-TX-0001742; Ex. D (Oxford) LHC-TX-0001646; Ex. H (Merriam) LHC-TX-0001704.) In other words, the phrase “formed on” indicates a product-by-process recitation.

Lowe’s proposal is also consistent with the specifications of the asserted patents, which use the various tenses of the verb “form” with the preposition “on” to describe the location of specified process steps. (*See* Dkt. 1-2 (’881 patent) 2:56 (“forming an epitaxial structure 202 on the growth substrate”), 2:61 (“[a]n electrode 203 is formed on the epitaxial structure”); Dkt. 1-4 (’340 patent) 4:4 (“a top electrode 20 formed on the top surface”), 24:51-52 (“the bottom electrode

30 and a temporary electrode 220 are formed on the carrier 10 using printing”).

Rather than engage in the *Markman* process, Epistar asserts that Lowe’s’ construction “injects ambiguity.” (Dkt. 37 at 14.) No such ambiguity, however, was identified. Indeed, Lowe’s’ construction is consistent with Dr. Fitzgerald’s testimony. (Ex. I, 199:22-200:4 (explaining that an electrode “formed on” a carrier means “to create electrodes on that carrier”).)¹⁷

C. Disputed Terms From U.S. Patent No. 9,065,022 (“the ’022 patent”)

2. “forming a first angle”

Lowe’s’ Proposal	Epistar’s Proposal
Creating an angle by intersecting.	Plain meaning

Epistar again fails to propose a construction. Instead, its analysis is limited to criticizing Lowe’s’. Epistar’s analysis, which is confusing and inconsistent with the ’022 patent, lacks merit.

Epistar’s analysis is founded on the assertion that Lowe’s’ construction improperly “excludes the preferred embodiments.” (Dkt. 37 at 16.) According to Epistar, such a construction would be improper. (*Id.* (citing *PPC Broadband, Inc. v. Corning Optical Comms. RF, LLC*, 815 F.3d 747, 755 (Fed Cir. 2016).) As Epistar’s own parenthetical confirms, that doctrine applies to a patent’s “preferred embodiment.” *PPC Broadband*, 815 F.3d at 755. *PPC Broadband* confirms that there is no requirement that “each and every claim [] be interpreted to cover each and every embodiment.” *Id.* Lowe’s’ proposal is consistent with preferred embodiments as depicted and described with respect to at least figures 4, 10, 11, and 12.

Moreover, Epistar reads far too much from the alleged counter-examples (figures 7 and 13A). As to the former, the vague depiction does not indicate a lack of intersection of substrate (2) and base (5). (*See also id.* at Dkt. 1-3 (’022 patent) 5:13-24 (explaining that “circuit board 6” can

¹⁷ There was initially a transcription error, where “formed on” was replaced with “formdine.” The reporter corrected the error in the transcript filed herewith upon request from Lowe’s’ counsel.

be “integrated with the support base”).) And as to the latter, Epistar narrowly interprets the recitation “forming a first angle” as “forming a first angle [with the top surface of the support base].” To be sure, that is an example of how such an angle can be measured. (*Id.* at 6:37-40.) But that is not the language that Epistar drafted, which is broader. Instead, because support (52) is described as a part of support base (5) in figure 13A (*id.* at 6:41-44), figure 13A also supports the substrate (2) and support (52) forming an angle (*i.e.*, 0°) by having co-planar surfaces.

3. “support base” (jointly proposed)

Lowe’s’ Proposal	Epistar’s Proposal
A structure on which an object rests.	A mechanism connected to the substrate to form an angle which is adjustable according to the required light shape of the light emitting apparatus

The dispute here is whether to afford the claim language its ordinary meaning (as proposed by Lowe’s) or instead to import exemplary features from the specification (as Epistar requests).

Ordinary meaning controls: “support” and “base” fall into the class of common terms for which the Federal Circuit has held dictionaries provide helpful guidance. *Phillips*, 415 F.3d at 1314. The relevant definitions here confirm that the terms broadly connote a structure on which an object rests. (Ex. D (Oxford) LHC-TX-0001648 (defining “support” as “a thing that bears the weight of something”), LHC-TX-0001649 (defining “base” as “the lowest part or edge of something esp. the part on which it rests or is supported”); Ex. B (Webster’s) LHC-TX-0001743 (defining “support” as “something that serves as a foundation”), LHC-TX-0001745 (defining “base” as “that on which a thing stands or rests”). These definitions are consistent with the ’022 patent, which depicts and describes a “support base 5” on which other objects rest.

Epistar’s proposal imports extraneous requirements: The closest Epistar comes to identifying what a “support base” is consists of the vague term “mechanism.” The remainder of its proposal seeks to identify what the support base is connected to and how it might be adjusted

“according to the required light shape of the light emitting apparatus.” As an initial matter, Lowe’s notes that the ’022 patent does not use the terms “mechanism” and “support base” interchangeably. Indeed, the patent describes a “support base 5” as a specific example of “a support mechanism 50.” (Dkt. 1-3 at 4:45-46 (“a support mechanism 50 such as the support base 5”).) Moreover, despite criticizing Lowe’s use of the word “structure,” nowhere does Epistar explain why that term fails to accord “support base” its proper ordinary meaning.

Next, as to the “connected to” portion of its proposal, nowhere does Epistar explain how or why that requirement is a necessary aspect of the recitation “support base.” Although not directly to the contrary, Lowe’s notes that claim 1 already recites that the “support base [is] coupled to said light emitting device.” (Dkt. 1-3 at 7:41.) Importing additional requirements from the specification is an improper form of claim construction. *Philips*, 415 F.3d at 1320.

Finally, regarding the “adjustable” portion of Epistar’s proposal, that language too must be rejected, as nothing in the recitation requires adjustability. And, even if all embodiments of the “support base” required adjustability (they do not), it would be improper to import such a requirement into the claims. *Thorner*, 669 F.3d at 1366. In reality, none of the disclosed embodiments require adjustability, and indeed, figures 12A, B, and C are directly to the contrary. For example, figure 12A (reproduced at right) shows a substrate (2) that fits vertically into a socket (51). (Dkt. 1-3 at 6:20-23.) Epistar’s proposed adjustability language, therefore, should be rejected.

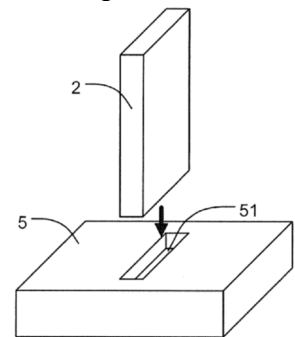


Fig. 12A

4. “a wavelength conversion layer disposed on said first main surface and/or second main surface of said light emitting device” (proposed by Lowe’s)

Lowe’s Proposal	Epistar’s Proposal
Indefinite	Plain meaning

Instead of proposing a construction, Lowe’s merely preserved its invalidity defense by identifying the term as indefinite. Epistar asserts that this preservation should count against

Lowe's' allotted number of terms. (Dkt. 37 at 4.) Lowe's disagrees, as the Court need not resolve definiteness at this stage. *See ConocoPhillips Co. v. In-Depth Compressive Seismic, Inc.*, No. CV H-18-0803, 2019 WL 1877374, at *17 (S.D. Tex. Apr. 26, 2019); *Mannatech, Inc. v. Techmedia Health, Inc.*, No. 306-CV-00813, 2009 WL 3614359, at *15 (N.D. Tex. Oct. 29, 2009).

To the extent that the Court deems it proper to address indefiniteness now, Lowe's notes that Epistar wrongly assumes the basis of the defense. Rather than an issue of whether "and/or" is sufficiently clear, Lowe's asserts that the phrase "said first main surface and/or second main surface of said light emitting device" as recited in claim 2 lacks antecedent basis. Claim 1 recites: "a substrate, having a support surface"; a "light emitting diode chip comprising a plurality of light emitting surfaces"; "one of said light emitting surfaces and said support surfaces and said support surface forming a first main surface"; and "a second main surface of said substrate opposing said first main surface." These various surface recitations render it unclear which are the "main surface[s] of said light emitting device." (Doolittle Decl. ¶44.) Epistar's decision to avoid clarifying the vague language it drafted should result in invalidity.

5. "said support base includes a support member and said light emitting device is disposed on said support member" (proposed by Lowe's)

Lowe's' Proposal	Epistar's Proposal
Construed under 35 U.S.C. § 112, ¶ 6. Function: to support. Corresponding structure. A narrow projection that extends up and outward from the support base and on which the light emitting device is mounted. Figs. 13A, 13B, 14A, 14B, 14C, 14D, 6:41-44.	Plain meaning

As identified by Epistar, the dispute is whether pre-AIA §112, ¶6¹⁸ applies to the term "support member." Epistar's analysis, however, fails to address the proper legal standard. As the Federal Circuit recognizes, "[g]eneric terms such as 'mechanism,' 'element,' 'device,' and other

¹⁸ Certain asserted patents are pre-AIA and other post-AIA. For purposes of claim construction, that distinction relates essentially to the citation format rather than substance.

nonce words that reflect nothing more than verbal constructs may be used in a claim in a manner that is tantamount to using the word ‘means’ because they ‘typically do not connote sufficiently definite structure’ and therefore may invoke § 112, para. 6.” *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1350 (Fed. Cir. 2015) (internal citation omitted). In addition, *Williamson* approvingly cited M.P.E.P. § 2181 (*id.*), which in turn refers to “member” as another such “nonce” word (M.P.E.P. § 2181). Here, Epistar tacitly concedes that the term “support member” does not itself connote definite structure, instead asserting that “[a]s used in the ’022 Patent, the support member refers to a protrusion referred to as a ‘support’”. (Dkt. 37 at 20; *see also id.* (citing Dkt. 1-3 (’022 patent) 6:41-60; Fig. 13A); *see also* Doolittle Decl. ¶45.) That the ’022 patent vaguely disclose structure is not a basis to escape §112, ¶6. Instead, Epistar’s reliance on those disclosures merely identifies the “corresponding structure, material, or acts described in the specification.”

D. Disputed Terms From U.S. Patent No. 9,664,340 (“the ’340 patent”)

1. “electrode” (jointly proposed)

Lowe’s Proposal	Epistar’s Proposal
A conductor through which electricity enters or leaves an object	An electrical conductor that is not part of the carrier

Whether a fundamental dispute exists is unclear. In particular, Epistar largely agrees with Lowe’s construction (Dkt. 37 at 20), but also proposes distinguishing an “electrode” as “not part of the carrier” (*id.*). Quite plainly, nothing in the ordinary meaning of “electrode” excludes one from being part of a “carrier.”¹⁹ Epistar does not suggest that the language of exclusion is required by lexicography or disclaimer. (*Id.* at 21-22.) Instead, Epistar relies on depictions in the figures to assert that “the electrodes are separate and distinct parts on top of the carrier.” (Dkt. 37 at 22; *see also* Ex. I (Fitz. Tr.) 189:21-191:2.) Importing details inferred from the figures, however, is not

¹⁹ (*See, e.g.,* Ex. D (Oxford) LHC-TX-0001652; Ex. B (Webster’s) LHC-TX-0001747; (Ex. E (Wiley) LHC-TX-0001759; Doolittle Decl. ¶¶46-47.)

proper. *GE Lighting Sols., LLC v. AgiLight, Inc.*, 750 F.3d 1304, 1309 (Fed. Cir. 2014).

The final paragraph of Epistar’s analysis raises a host of other questions. Epistar asserts that Lowe’s’ proposal is flawed because “contacting pads and the semiconductor layers all can be considered as part of the ‘electrode’ because they conduct electricity.” (Dkt. 37 at 22; *see also* Ex. I (Fitz. Tr.) 205:9-210:15.) As to the “contacting pads,” Epistar fails to explain why those structures fall outside the ordinary meaning of the term electrode. And as to “semiconductor layers,” Epistar ignores the fact that Lowe’s’ construction requires “[a] conductor” rather than a “semiconductor.” (Doolittle Decl. ¶48.) Indeed, there is nothing in Epistar’s own proposal that would exclude a semiconductor under the same flawed reasoning. Regardless, the fundamental issue is what an “electrode” is, not what other structures or materials an “electrode” is not.

4. “a transparent body covering the first part, the second part, the third part and the first light-emitting unit” (proposed by Epistar)

Lowe’s’ Proposal	Epistar’s Proposal
A structure, through which objects may be clearly seen, that extends over at least a portion of the first part of the first [electrode], the second part of the first [electrode], the first part of the second [electrode], and the first light emitting unit.	The term “transparent” should be afforded its plain meaning. The remaining terms refer to a protective structure directly contacting the first part, the second part, the third part and the first light-emitting unit

Rather than substantively support its proposal, Epistar limits its analysis to criticizing Lowe’s’ proposal. Epistar’s view of the substantive disputes, therefore, is unclear.

Regarding “transparent,” ordinary meaning is addressed in Section IV.A.1. To avoid repetition, that analysis is not repeated here. Instead, Lowe’s notes that Epistar does not assert that “transparent” has a special meaning in the ’340 patent, and therefore, ordinary meaning applies.

The ordinary meaning of “covering” should control: Epistar fails to meaningfully address the scope and meaning of that common term “covering.” The verb “cover” has the ordinary meaning “extend over; rest upon the surface of . . . to place something over or upon as for protection, concealment, or warmth.” (Ex. B (Webster’s) LHC-TX-0001749; *see also* Ex. H

(Merriam) LHC-TX-0001710 (defining cover as “to lie over: ENVELOP . . . to lay or spread something over: OVERLAY”).) Indeed, Epistar cites similarly broad definitions (Dkt. 37 at 23), but materially narrows those definitions to require a “protective structure directly contacting” the other recited structures. (Dkt. 37 at 22-23.) According to Epistar, the broader ordinary meaning is “at odds with the intrinsic record.” (*Id.*) Rather than seeking to construe “covering,” Epistar’s again seeks to import details from the ’340 patent’s specification. (*Id.*; *see also* Ex. I (Fitz. Tr.) 219:21-222:1; Doolittle Decl. ¶¶49-50.) Precedent, however, forecloses relying on such disclosure to narrow the ordinary meaning of “covering.” *See Thorner*, 669 F.3d at 1365-66.

Lowe’s’ clarifying construction is proper: Epistar criticizes Lowe’s’ construction for explaining that “the first part”, “the second part”, and “the third part” correspond to the “first part of the first electrode”; the “second part of the first electrode” and the “first part of the second electrode.” (Dkt. 37 at 23.) Put simply, the language of claim 1 is obtuse. The clarifying language is intended solely to render that language understandable to that jury, which is proper. *See Eon Corp.*, 815 F.3d at 1320; *TQP Dev., LLC v. Merrill Lynch & Co.*, No. 2:08-CV-471, 2012 WL 1940849, at *2 (E.D. Tex. May 29, 2012) (explaining that the construction should “assist the jury to understand the claims”); *see also Moto Boost Techs., LLC v. Viatek Consumer Prod. Grp., Inc.*, No. CV1308813, 2014 WL 12588647, at *13 (C.D. Cal. Dec. 19, 2014) (“The purpose of claim construction is to establish what the claim means such that a jury can properly assess infringement or invalidity.”). The explanation provided in *Largan Precision Co, Ltd v. Genius Elec. Optical Co.*, No. 13-CV-02502, 2014 WL 5358426, at *4 (N.D. Cal. Oct. 20, 2014), is particularly instructive:

[Plaintiff] is of course correct that where a claim term is given its plain and ordinary meaning, it is the plain and ordinary meaning of the term to a person of ordinary skill in the art . . . But that is no reason why a claim term cannot be given a construction that explains, in language comprehensible to a jury, what the term

means to a person of ordinary skill in the art. After all, the factfinder in patent trials is usually a jury of laypersons, and claim terms written in technical language may have to be recast in words that non-experts will understand.

2014 WL 5358426, at *4. The Court should therefore adopt Lowe’s clarifying proposal, which will help the jury decide the substantive issues presented.

5. “the first part extends beyond the side surface” (proposed by Lowe’s)

Lowe’s’ Proposal	Epistar’s Proposal
The first part extends further than the edge of the side surface.	Plain meaning

What appeared at first to be a simple issue of construing the somewhat vague language “extends beyond the side surface” now appears to highlight a clear flaw in the ’340 patent, the lack of disclosure of the “invention” as interpreted by Epistar.

The phrase “extends beyond” does not appear in the ’340 patent’s specification, instead occurring only in claim 4, which was added during prosecution. (Ex. K (’340 file history) original claims filed 6/10/2014), pdf pgs. 288-90.) Based on the simplicity of the claim language, Lowe’s proposed “extends further than the edge.” Although Epistar appears to disagree with Lowe’s’ construction, it fails to identify any actual flaw in that proposal. Instead, Epistar merely references element 253 of figures 6A and 6B, which is entirely consistent with Lowe’s’ construction. Epistar’s reliance on figures 6A/6B in particular, however, cannot provide support for claim 4, which depend, in turn, on claim 1. Put succinctly, the figure 6A/B embodiment lacks the electrodes and their electrode parts as they are recited in claim 1. Instead, it appears that claim 4 was added during prosecution by cobbling together features of multiple distinct embodiments. Indeed, that recitation first appeared as application claim 21 on August 5, 2016, more than two years after filing. (Ex. K (’340 file history) amendment of 6/10/2014), pdf pg. 137.) To the extent that Epistar believes that figures 6A and 6B support a special narrow meaning of this claim recitation, reliance on that portion of the ’340 patent’s disclosure cannot, in fact, provide support for the conclusion

Epistar seeks, because it is based on an undisclosed embodiment.

6. “wherein the first part and the third part are electrically separated from each other when the first light-emitting unit is not disposed on the top surface” (proposed by Lowe’s)

Lowe’s Proposal	Epistar’s Proposal
Indefinite.	Plain meaning

The core dispute with regard to this claim term is indefiniteness. As with the recitation addressed in Section C.4. above, the issue is raised now for purposes of avoiding an assertion of waiver at a later date. The Court is free to address the issue now (based on the analysis below) or instead based on a more complete record at a later stage of the litigation.

Instead of addressing the language of the term as drafted, Epistar rewrites that recitation to provide “[i]f the first light-emitting unit . . . is removed.” (Dkt. 37 at 24.) That corrective language cannot fix the patent error, which requires the removal of a light-emitting unit, *i.e.*, “when the first light-emitting unit is not disposed on the top surface.” (Ex. I (Fitz. Tr.) 222:12-226:8; Doolittle Decl. ¶52.) Given that claim language, it is “unclear when infringement occurs,” rendering the claim indefinite. *H-W Tech., L.C. v. Overstock.com, Inc.*, 758 F.3d 1329, 1335 (Fed. Cir. 2014). Moreover, this was not an error subject to correction by a district court. *Novo Indus., L.P. v. Micro Molds Corp.*, 350 F.3d 1348, 1354 (Fed. Cir. 2003). Instead, the claim reads coherently as written. *H-W Tech.* 758 F.3d at 1333. Based on the language as written, infringement does not occur based on the device as made, used, sold, or offered for sale, but instead only based on a later change. (Ex. I (Fitz. Tr.) 226:4-8; Doolittle Decl. ¶52.) The claim, therefore, is indefinite.

7. “covers a side surface” (proposed by Lowe’s)

Lowe’s Proposal	Epistar’s Proposal
Extends over at least a portion of the side surface.	Plain meaning

As pointed out frequently in this brief, Epistar’s changes of position are frequent. Just a few terms prior, in Section IV.D.4 directed to the term “covering”, Epistar proposed the narrow

meaning “protective [and] directly contacting.” Here, in contrast, Epistar insists that the similar term “cover” be given its “plain meaning.” Nowhere, however, does Epistar identify that meaning or attempt to reconcile its positions.

Although Epistar refuses to join issue, Lowe’s notes that the term could be understood to require extension over the entire underlying surface or only a portion of that surface. As the Federal Circuit explained in *Phillips*, other claims of the same patent can sometimes provide guidance. 415 F.3d at 1314. Here, claim 14 suggests that partial coverage falls within the scope of “covers” by clarifying that the recited structure there “fully covers an end portion.” (Dkt. 1-4 at 48-50.) Further support is also provided in the figures and text, where in figures 1A, B, and C, for example, transparent body 103 is described as “covering the top electrode 20” (*id.* at 9:15-16), despite extending over only a portion of that structure.

E. Disputed Terms From U.S. Patent No. 10,224,455 (“the ’455 patent”)

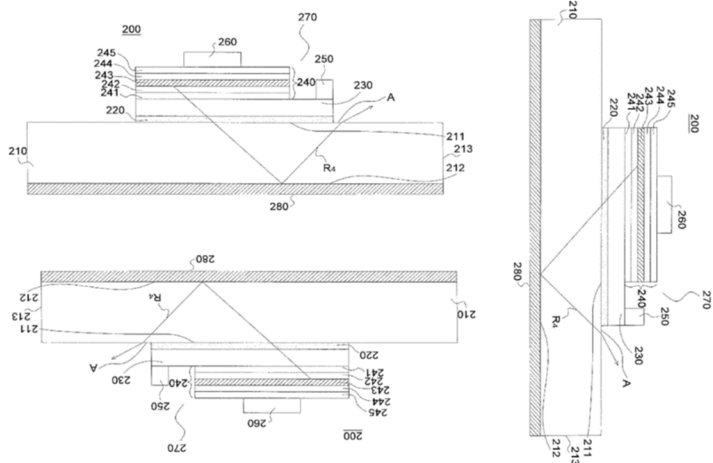
2. “top surface” (proposed by Epistar)

Lowe’s Proposal	Epistar’s Proposal
Surface opposite from the bottom surface.	A surface of the transparent substrate directly contacting the first transparent layer

Although Lowe’s proposal may at first glance seem trite, the fundamental issue here is whether a substrate’s “top surface” has a structural distinction from its bottom.

Throughout its brief, Epistar suggests that Lowe’s proposals for simple terms should be rejected in favor of “plain meaning.” Consistent with its penchant for inconsistency, here Epistar selected the simple term “top surface” for construction. The point of Lowe’s proposal is that the concepts of top and bottom are arbitrary in this context. (Doolittle Decl. ¶54.) In the embodiment depicted and described with respect to the ’455 patent’s figure 2A (reproduced with different orientations in the image below right), no structural distinction between the “top” of substrate

(210) and its opposite is indicated. Indeed, if the final disposition of the structure were upside down or sideways (as indicated by the rotated versions of figure 2A), it cannot be that the “top” surface changed. (See also Dkt. 1-5 (’455 patent) at Figs. 3-7, 5:1-62 (indicating that a device may be flipped upside down as part of the manufacturing process).)



Indeed, Epistar's other asserted patents confirm that the concept "top" when used to characterize mounted LEDs is arbitrary. (See Dkt. 1-2 ('881 patent) Fig. 6; Dkt. 1-3 ('022 patent) Figs. 2A-C; Dkt. 1-4 ('340 patent) Fig. 5A.) For example, in figure 5A of the '340 patent (reproduced at right), the devices toward the top of the page are described as on the "top" of substrate (10'), whereas the devices toward the bottom of the page are described as on the "bottom." (Dkt. 1-4 ('340 patent) 9:4-16.) Those designations, however, are not based on the structure of substrate (10'), but instead the orientation of the page.

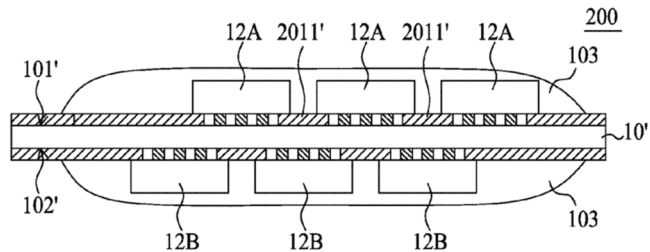


FIG. 5A

Epistar’s construction fails to address the meaning of “top surface” in the context of the claims or specification, and instead merely identifies the “top” based on contacting a separately recited structure. Indeed, rather than defend its construction, Epistar purports to identify the “[t]he purpose of the ’455 patent,” which it asserts “is to extract light from the transparent substrate towards the side where LED chips are disposed (i.e., the top side).” (Dkt. 37 at 26.) That description of the “purpose” finds no support in the claim language, and therefore, must be

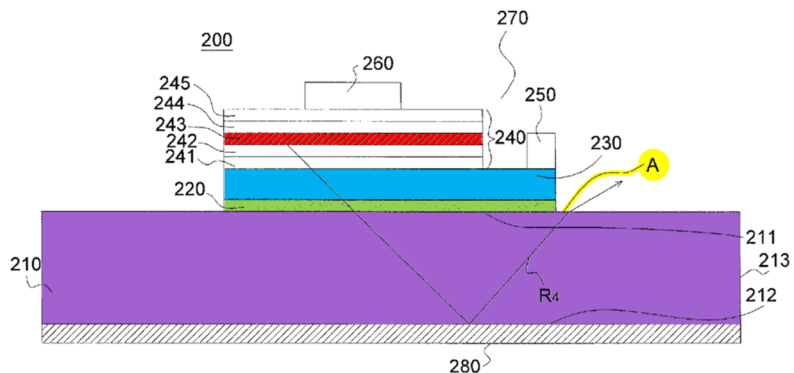
rejected. *E-Pass*, 343 F.3d at 1370 (Fed. Cir. 2003) (finding error where the “district court sought to limit the claims in light of the perceived purpose served by the invention”). Moreover, to the extent that the top surface of the substrate 10' has any specific meaning in the context of the '455 patent, that meaning is the surface opposite reflector (280) as shown in every figure. Although Epistar ignores the central role that the reflector plays in achieving the “purpose,” if its proposal were modified to include that clarification, Lowe's would be unlikely to oppose.

3. “a first electrode arranged on the first transparent layer and the second transparent layer which are not covered by the active layer” (proposed by Lowe's)

Lowe's' Proposal	Epistar's Proposal
Indefinite ²⁰	Plain meaning

The parties take diametrically opposed positions with regard to this term. Lowe's believes the term represents an uncorrectable drafting error. In contrast, Epistar asserts that the language is so clear that no construction is warranted. Epistar's position is not tenable.

At a surface level, the lack of clarity in the recitation flows from the identification of three structures (first electrode, first transparent layer, and second transparent layer) at the beginning of the above-quoted clause followed by the exclusive language “which are not.” The use of “are” indicates that the exclusion applies to at least two (and potentially all three) of the preceding structures, which is a first source of ambiguity. Adding more ambiguity, in every embodiment disclosed in the '455 patent, the active layer does cover the first and second transparent layers. For example, in figure 2A (reproduced at right with color added), the red



²⁰ Again, the Court can address the issue now or upon a more complete record later.

active layer (234) extends over blue transparent conductive layer (230), green transparent adhesive (220) and purple transparent substrate (210). The claim language, therefore, is inconsistent with the figures. (Doolittle Decl. ¶55.)

The specification exacerbates this ambiguity by inconsistently explaining that the “the first surface 211 of the transparent substrate [210] would form an exposed portion, ‘A’ [highlighted yellow above], not covered with the light-emitting layer 243.” (Dkt. 1-5 at 4:1-3.) In other words, it is “portion A” that is not covered by the active layer. This interpretation is confirmed by the further explanation: “the exposed portion ‘A’, in the figure is not covered with the multi-layer epitaxial structure 240, the first transparent conductive layer 230, and the transparent adhesive layer 220.” (*Id.* at 4:5-8.) The claim language, however, mistakenly refers to other structures rather than “portion A.” The specification, therefore, is inconsistent with any reasonable interpretation of the term “not covered” as used in the phrase “a first electrode arranged on the first transparent layer and the second transparent layer which are not covered by the active layer.”

Despite the vague claim language, here again Epistar asserts that no construction is necessary because “Epistar believes the term is clear to a POSITA and is not indefinite.” (Dkt. 37 at 26.) Whether a skilled artisan could revise the language as drafted to render it comprehensible is not a reasoned basis to avoid providing the jury with an understandable construction. *Eon Corp.*, 815 F.3d at 1320. More importantly, nowhere does Epistar defend the clarity of the language as drafted. Instead, Epistar urges that the claim language is consistent with figure 2A because “the epitaxial structure (which includes the active layer 234) also sits on top of the second [transparent layer 220] and first transparent layer [230], does not cover the entire surface of the second transparent layer.” (Dkt. 37 at 27.) That, however, is not what claim 1 says. Claim construction is not the proper venue for correcting Epistar’s erroneous claim language. *Novo*, 350 F.3d at 1354;

Raytheon Co. v. Roper Corp., 724 F.2d 951, 956 (Fed. Cir. 1983).

Moreover, Epistar does not actually suggest using claim construction to correct or clarify the term, requesting instead that the jury be instructed with the mistaken language as drafted. The Court should reject Epistar’s request.

4. “the second transparent layer and the transparent substrate have outmost sidewalls which are not coplanar with each other” (proposed by Epistar)

Lowe’s’ Proposal	Epistar’s Proposal
The <u>outmost</u> ²¹ side surfaces of the second [transparent] layer are not on the same plane as the <u>outmost</u> side surfaces of the [transparent substrate].	The terms of this element should be afforded their plain meanings. A person of ordinary skill in the art reading the claim as a whole in light of the specification would understand that the purpose of this phrase is to extract light from the portion of the transparent substrate that is not coplanar with the second transparent layer

For this final claim term, it is unclear once again whether a fundamental dispute exists. Although Epistar selected this term for construction, it asserts that “plain meaning[]” is sufficient. Rather than identify that meaning, however, Epistar suggests that a “person of ordinary skill . . . would understand . . . the purpose of this phrase.” (Dkt. 37 at 28.) The sole “purpose” of claim language is to “particularly point[] out and distinctly claim[] the subject matter which the inventor or a joint inventor regards as the invention.” 35 U.S.C. §112(b). To the extent that Epistar intended to refer to the purpose (or function or benefit) of the recited structure, that too is irrelevant for purposes of claim construction. *E-Pass*, 343 F.3d at 1370. By failing to identify what is structurally required, Epistar’s proposal and supporting analysis are misdirected. (Doolittle Decl. ¶24.)

V. CONCLUSION

For the foregoing reasons, Lowe’s respectfully request that the Court adopt the claim constructions it proposes and reject those presented by Epistar.

²¹ To avoid unnecessary dispute, Lowe’s added “outmost” to its proposed construction.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

I certify that on December 31, 2020, I electronically filed the foregoing with the Clerk of the Court by using the CM/ECF system, which will send notice of electronic filing to all counsel of record.

/s/ Sara Schretenthaler Staha
Sara Schretenthaler Staha